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ABSTRACT

This report investigated how teachers use reading materials in the classroom and examined the kinds of decisions teachers make concerning how youngsters will use those materials. The classroom practice of sixteen primary and sixteen intermediate grade teachers was observed during daily reading classes, and data were recorded through classroom environment checklists, observation sweeps, and teacher interviews. Data were interpreted and presented on the following seven questions: (1) What materials are available in the classroom to teach reading? (2) What materials are most commonly used for teaching reading? (3) What materials are least used? (4) What materials are used during seatwork? (5) What are the number and size of groups using materials? (6) What roles do teachers play while using materials? and (7) How many minutes are scheduled for students to use materials with the teacher? On their own? (MJB)

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Teacher's Use of Classroom Materials

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Purpose of Study

In discussing needed research on teaching, Joyce (1975, p 98) has stated that the questions, "What materials is the learner exposed to and for how long?" and "What role does the teacher play in getting the learner together with materials?" must be answered. This study was designed to gather and report information that would help to answer these questions.

Specifically, this study reported on information about how teachers use reading materials in the classroom and about the kinds of decisions teachers make concerning how youngsters will use classroom materials. This study was designed to answer the following questions:

1. What materials are available in the classroom to teach reading?
2. What materials are most commonly used for teaching reading?
3. What materials are least used?
4. What materials are used during seatwork?
5. What are the number and size of groups using materials?
6. What roles do teachers play while using materials?
7. How many minutes are scheduled for students to use materials with the teacher? On their own?

Whenever relevant, for each of the questions 1-7, comparisons were made to determine if differences existed between Primary and Intermediate teachers in their use of materials.

Current research provides evidence which encourages a closer look at the use of instructional materials in the classroom.

Rosenshine and Furst have stated that it is unfortunate, but "there are not enough studies of any subject area even to begin to suggest different patterns of effectiveness for different materials and grade levels" (1971, p. 64).

Rosenshine (1976) has stated that seatwork has been identified as a pervasive classroom activity which has seldom been studied. He continued by saying that there should be "increased research on the management of seatwork and or the related topics such as individualization and instructional materials" (1976, p. 1).

Berliner and Tikunoff (1976) developed a study to identify variables of promise in the study of teacher effectiveness. Using an ethnographic approach to the study of teaching, they were able to identify 61 variables significantly related to a teacher's measured effectiveness within the classroom. Item 58 is referred to as "teacher-made materials," which is described as "... the teache provides instructional materials other than textbooks, and arranges their use by students" (p. 28).

One of the conclusions expressed by McDonald (1976), in his study of teacher effectiveness, was that the students who made the largest gains worked with teachers who used a variety of materials and kept students on task with techniques other than discipline. McDonald suggested that it is important to look at how such materials are being used by teachers.

The literature has supplied evidence to encourage researchers to gather additional data about the use of instructional materials in the classroom.

Method

Subjects

The sample consisted of 16 Primary teachers (Grades 1-3) and 16 Intermediate teachers (Grades 4-6) from four separate schools in the Dayton, Ohio Public School System. The Primary teachers were all females with teaching experience ranging from three to eighteen years. Three of the Intermediate teachers were men with the teaching experience of the total Intermediate group ranging from one to twenty-two years.

Material and Procedures

Two instruments were designed specifically to be used to gather the information. The first instrument was the Observation Instrument which was designed specifically to record how reading materials were used during the regularly scheduled time for reading instruction. This instrument consisted of two sections: The Classroom Environment Checklist (checklist) and the Observation Sweep (sweep). The second instrument was the Interview Schedule which was designed to answer questions about how teachers planned to use materials and how those decisions were reached.

For each subject, two investigators independently conducted the individual classroom observations followed by the individual interviews so that a total of 32 observations and 32 interviews were completed. Each investigator made contact with two teachers per day. Teachers were selected by the investigators according to grade level and to develop a workable time schedule. Since it had been determined that using only one subject area would be best for purposes of this study, the observations were conducted during the reading period because reading receives approximately equal curriculum emphasis on a daily basis.

Upon entering the classroom, the observer verified that reading materials were actually being used. Next the investigator surveyed the room and recorded the materials available for teaching reading as indicated on the checklist. Then the sweep instrument was used to record how the materials were being used. A completed observation consisted of from 22 to 30 sweeps and from 32 to 61 minutes.

The interviews were always conducted after the observations and in all cases the teachers were relieved of their classroom responsibilities. The interviews were tape-recorded with the length of time varying from 25 to 35 minutes.

Results

Using the Classroom Checklist, data were collected during individual observations of each teacher. Analysis of these data has provided results related to many areas of inquiry. Three of these areas include: materials available for teaching reading, materials most commonly used, and materials least used.

QUESTION 1 - What materials are available in the classroom to teach reading?

As indicated in Table 1, the two items labeled Textbook and Workbook were present in all of the classrooms for both the Intermediate and the Primary grades. The item least present for the Intermediate grades was Teacher-made Worksheets (13 per cent) and for the Primary grades was Magazines (25 per cent).

The last item on the checklist is listed as Others. As shown in Table 1, this item was recorded in 69 per cent of the Intermediate classrooms and 75 per cent of the Primary classrooms. Materials which were recorded under this item included: chalkboard, filmstrips, math materials, record and book sets, video-tapes, earphones, student papers, maps, and reading tests.

QUESTION 2 AND 3 - What materials are most commonly used for teaching reading?/and least used?

Table 2 provides two more parts of data related to the checklist: materials most commonly used, and materials least used. As indicated in Table 2, the two materials most commonly used in the Intermediate classrooms were the Text (55 per cent) and the Workbook (51 per cent); while in the Primary classrooms the Text (50 per cent) and Others (43 per cent) were the most used.

The data collected on the sweep were used to provide results that indicate which materials were used during seatwork, number and size of groups using materials, and the percentage of time each teacher worked with groups of various sizes.

QUESTION 4 - What materials are used during seatwork?

The data from the observations, shown in a collapsed version in Table 3, indicate variation in only three classrooms. In all but these three cases, the students working at their seats spent 100 per cent of their time using Written, Inductive, Teacher Controlled materials. The three exceptions observed were all Primary.

QUESTION 5 - What are the number and size of groups using materials?

Table 4 presents the mean number of groups with standard deviation and the mean size of groups with standard deviation for each teacher. Table 4 also displays the means and standard deviations for number of groups and size of groups with standard deviation for each teacher. Table 4 also displays the means and standard deviations for number of groups and size of group for all Intermediate and all Primary teachers.

Only one Intermediate teacher, Number 12, and one Primary teacher, Number 14, worked with the class as a single large group during the entire observation.

The descriptive data from Table 4 were used to explore whether or not differences were observed in the mean size of groups in Intermediate and Primary teachers' classrooms during reading instruction.

Table 1

Percentage of Materials Available in 16 Primary and 16 Intermediate Classrooms

Material	Intermediate		Primary	
	Number	Percentage	Number	Percentage
Text	16	100	16	100
Reader	13	81	10	63
Workbook	16	100	16	100
Worksheet	7	44	13	88
Kits	14	88	10	63
Games	10	63	15	94
Manipulative	5	31	10	56
Teacher Sheets	2	13	8	50
Teacher Materials	10	63	11	69
Trade Books	14	88	15	94
Student Materials	5	31	5	31
Magazines	8	50	4	25
References	14	88	10	62
Others	11	69	12	75

Table 2

Means and Standard Deviations for Proportion[a] of Use for Each Material in Intermediate and Primary Classrooms

	Intermediate			Primary		
	Number of Rooms Where Material Being Used N = 16	Mean Proportion[a] of Use	Standard Deviation	Number of Rooms Where Material Being Used N = 16	Mean Proportion[a] of Use	Standard Deviation
Text	13	.55	.34	11	.50	.44
Reader	9	.30	.33	6	.30	.40
Workbook	12	.51	.39	12	.38	.30
Worksheet	5	.18	.32	9	.19	.34
Kits	6	.24	.38	1	.05	.18
Games	2	.03	.12	3	.13	.30
Manipulative	1	.00	.02	3	.07	.22
Teacher Sheets	1	.01	.04	6	.11	.25
Teacher Materials	4	.07	.14	6	.12	.19
Trade Books	4	.08	.20	4	.05	.12
Student Materials	1	.00	.04	0	.00	.00
Magazines	0	.00	.00	1	.01	.02
References	5	.15	.27	3	.08	.17
Others	11	.35	.34	10	.43	.43

[a] This statistic is based upon the number of rooms where material was being used. For every teacher, a proportion was computed by dividing the number of sweeps the material was observed in use by the total number of sweeps.

Table 3

Materials Used by Students Involved in Seatwork
by Percentage of Sweeps

Teacher	Media-Mode			Instructional Style of Material			Control of Materials	
	Written	Audio	Manipulative	Programmed	Inductive	Open	Teacher	Student
1			100		100		100	
4	100			5	95		100	
14	100			100			100	
All Others	100				100		100	

Table 4

Means and Standard Deviations for Number of Groups and Size of Groups for Each Intermediate and Primary Teacher

Teacher	Mean Number of Groups	Standard Deviation	Mean Size of Groups	Standard Deviation
		Intermediate		
6	2.6	1.7	8.9	8.3
7	3.0	.0	8.1	3.4
8	2.3	1.5	9.5	8.3
9	5.1	.8	4.8	3.0
10	2.4	.8	8.9	5.5
11	2.2	1.2	12.0	8.3
12	1.0	.0	27.0	.0
13	3.5	1.0	3.9	2.5
15	2.9	1.2	8.1	6.7
17	4.4	.5	4.3	2.3
18	3.6	.8	6.0	3.9
23	2.3	.9	8.2	4.4
29	2.1	.9	7.0	5.4
30	2.4	1.4	6.0	4.4
31	2.0	1.0	9.9	6.4
32	4.3	1.0	3.0	1.7
All Intermediate	2.9	1.0	8.5	5.3
		Primary		
1	2.3	.7	8.9	6.5
2	2.8	.5	5.0	7.4
3	4.4	.5	4.2	1.3
4	3.3	.4	4.8	2.7
5	4.1	1.3	5.6	4.3
14	1.0	.0	20.0	.0
16	1.3	.2	22.8	7.6
19	5.8	.9	3.3	1.7
20	5.1	.4	4.1	7.6
21	3.2	1.6	6.5	7.5
22	4.5	1.0	3.5	2.5
24	4.0	1.3	3.7	1.9
25	2.6	1.4	8.2	4.9
26	4.1	1.8	3.7	2.1
27	4.7	.5	4.0	1.8
28	4.3	.7	3.2	1.9
All Primary	3.5	1.3	7.0	5.7

Table 5 indicates a significant difference ($a < .05$) between the size of groups used by Intermediate and Primary teachers.

QUESTION 6 - What roles do teachers play while using materials?

This question was addressed by recording the teacher's role during each observation sweep. The total for each role was then divided by the total number of sweeps for the entire observation to provide the percentage of sweeps spent in each role. Table 6 provides this information as well as the total number of roles played by each teacher.

The descriptive data from Table 6 were used to see what differences existed between the number of roles played by Intermediate and Primary teachers. As shown in Table 7, a significant difference ($a < .01$) exists between the number of roles played by the two groups of teachers.

The next question to be answered was, "Is there a difference in the amount of time that Primary and Intermediate teachers spend in each role?" By looking at the data supplied by Table 6, it was determined that in the Roles of Instructing and Evaluating there might be significant differences. Table 8 presents these test results with a significant level of .02 which indicates that Primary teachers spend more time Instructing than do Intermediate teachers.

The role of Participating was least used by both Intermediate and Primary teachers. The most used role was that of Instructing. The role labeled Other was included to indicate that the teacher was not involved with reading materials during that sweep. Teacher involvement during Other periods included: posting papers other than reading on the bulletin board, getting children ready to change classes, disciplining, changing groups, talking on the telephone, talking about cleaning chores, and passing out books.

QUESTION 7 - How many minutes are scheduled for students to use materials with the teacher? On their own?

The information concerned with the amount of time spent using materials was derived during the interview session. Question 2 on the Interview Schedule asked "Will you estimate how much time in the course of a day that a child spends working with you individually or in small group reading instruction?" and "Can you estimate how much time in the course of a day a youngster spends working with reading materials while you are involved with other students?" Table 9 reflects the responses to these two questions by simply displaying the teacher's responses in terms of minutes. The mean and standard deviation for each set of data have been provided.

Implications

A striking feature concerning a literature review dealing with the use of Instructional Materials is the limited number of references to such a topic. Studies have reported on the effectiveness of various materials in

Table 5

Frequencies for 32 Teachers Categorized by Teaching Level and by Their Involvement with Smaller or Larger Groups During the Use of Reading Materials

Teachers	Size of Group[a]		Chi Square	Level of Significance
	Smaller	Larger		
Primary	11	5	4.52	.05
Intermediate	4	12		

[a]Group split at median for mean size of groups. Smaller was 6.0 and less, Larger was 6.5 and more.

Table 6

Proportion of Sweeps Spent in Each Role for Each Intermediate and Primary Teacher

Teacher	Roles[a]						
	G.D.	Ins.	Obs.	Part.	Eval.	Pres.	Other
Intermediate							
6	.04	.56	.24	.00	.08	.04	.04
7	1.00	.00	.00	.00	.00	.00	.00
8	.09	.57	.13	.13	.04	.00	.04
9	.04	.84	.08	.00	.00	.00	.04
10	.08	.54	.04	.00	.19	.00	.15
11	.17	.57	.00	.00	.03	.13	.10
12	.04	.89	.00	.00	.00	.00	.07
13	.03	.83	.00	.00	.07	.07	.00
15	.13	.60	.00	.00	.00	.00	.27
17	.00	.80	.07	.00	.00	.07	.06
18	.04	.68	.04	.00	.12	.08	.04
23	.20	.63	.03	.00	.07	.00	.07
29	.13	.40	.00	.00	.07	.00	.40
30	.14	.52	.04	.00	.04	.00	.26
31	.30	.13	.27	.00	.07	.00	.23
32	.27	.45	.00	.00	.09	.00	.18
Mean	.17	.56	.06	.01	.05	.02	.12
S.D.	.06	.23	.08	.03	.05	.04	.11
Primary							
1	.09	.87	.00	.00	.04	.00	.00
2	.00	.96	.00	.00	.00	.00	.04
3	.00	1.00	.00	.00	.00	.00	.00
4	.15	.64	.15	.00	.00	.00	.05
5	.13	.84	.00	.00	.03	.00	.00
14	.15	.52	.15	.03	.00	.00	.15
16	.22	.32	.05	.00	.18	.00	.23
19	.17	.60	.03	.00	.07	.13	.00
20	.00	.71	.08	.00	.13	.00	.08
21	.13	.77	.00	.00	.00	.00	.10
22	.05	.90	.00	.00	.05	.00	.00
24	.05	.75	.00	.00	.10	.00	.00
25	.00	.77	.00	.00	.00	.00	.23
26	.00	.80	.20	.00	.00	.00	.00
27	.04	.92	.04	.00	.00	.00	.00
27	.07	.85	.00	.00	.00	.00	.08
Mean	.08	.76	.04	.00	.04	.01	.06
S.D.	.07	.17	.06	.04	.05	.03	.08

[a]G.D. means giving directions; Ins. is instructing; Obs. is observing; Part. is participating; Eval. is evaluating; Pres. is prescribing.

Table 7

Frequencies for 32 Teachers Categorized by Teaching Level and by the Number of Roles Played Indicated at Below the Median or At the Median and ABOVE While Using Reading Materials

Teachers	Number of Roles		Chi Square	Level of Significance
	Below Median	Median[a] and ABOVE		
Primary	11	5	6.22	.01
Intermediate	3	13		

[a]Group split at median for mean number of roles played. Below Median was 3 and less while at Median and above was 4 and more. Median number of roles was 4.

Table 8

Frequencies for 32 Teachers Categorized by Teaching Level and by Whether Each Spent Less or More Time in the Roles of Instructing and Evaluating During Reading Instruction

Roles	Teachers		Chi Square	Level of Significance
	Primary	Intermediate		
Instructing				
Less	4	12	6.13	.02
More	12	4		
Evaluating				
Less	10	5	2.01	.20
More	6	11		

Table 9

Means and Standard Deviations of Minutes Spent With and Without the Teacher While Using Reading Materials for Each Intermediate and Primary Teacher

Teacher	Minutes With Teacher	Minutes Without Teacher	Total Time With Materials
		Intermediate	
6	30	105	135
7	60	120	180
8	60	60	120
9	20	40	60
10	20	40	60
11	60	60	120
12	45	75	120
13	30	15	45
15	30	45	75
17	30	20	50
18	45	120	165
23	30	60	90
29	40	40	80
30	30	240	270
31	60	45	105
32	45	180	225
Mean	39.69	79.06	118.75
S.D.	13.86	59.01	62.16
		Primary	
1	45	60	105
2	20	40	60
3	40	20	60
4	30	90	120
5	20	70	90
14	150	45	195
16	30	45	75
19	20	60	80
20	30	60	90
21	30	60	90
22	45	75	120
24	30	180	210
25	45	45	90
26	45	30	75
27	45	25	70
28	60	45	105
Mean	42.80	59.38	102.19
S.D.	29.79	35.92	41.86

relation to student progress, but have not supplied information concerning how materials are used in terms of time, seatwork or in relation to the types of roles that teachers play while using materials. A purpose of this study was to provide some of this information.

The importance of how materials are being used and what materials are used are concerns that are becoming increasingly highlighted. According to the National Council for Citizens in Education (NCCE), a study (1974, p.3) conducted in Texas, found that "students spend 75 per cent of their classroom time and 90 per cent of their homework time using textbooks and related materials."

Faced with a lack of definitive research in the use of classroom materials and the NCCE report that students spend much of their educational experience using materials, this study has initiated efforts to provide descriptive data to answer questions about the use of classroom materials. Hopefully, these findings can be used in conjunction with other relevant data to provide a partial base for teacher training program development. The importance of designing training programs to include how to use materials is supported by Rosenshine (1975).

It is hoped that this study will spark continued research in how classroom materials are used. Other areas of possible study include looking at the quality of the materials being used, investigating if differing use of materials effects student achievement, and exploring whether youngsters use materials if they are not part of an assignment.

It is hoped that the results of this study will contribute to the development of teacher training programs and to the design of additional studies of inquiry into the use of classroom materials.

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